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JUN 23 1967

CURRENT SERIAL RECORDS



WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE
and
COLORADO AGRICULTURAL EXPERIMENT STATION
STATE ENGINEER of COLORADO
and STATE ENGINEER of NEW MEXICO

Data included in this report were obtained by the agencies named above in cooperation with the Bureau of Reclamation, U.S. Forest Service, National Park Service, Corps of Engineers and other Federal, State, and private organizations.

AS OF
MAR. 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



**FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND WATER SUPPLY FORECASTS
for
COLORADO RIVER, PLATTE RIVER
ARKANSAS RIVER AND RIO GRANDE DRAINAGE BASINS
issued**

March 1, 1967

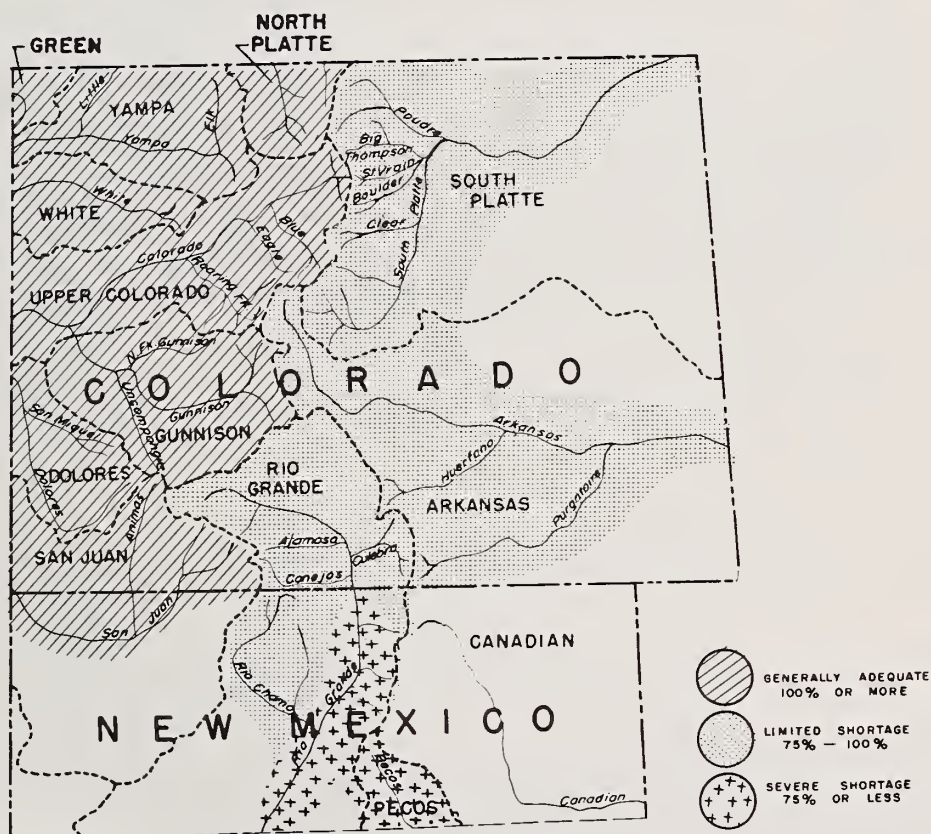
Report Prepared By

Jack N. Washichek, Snow Survey Supervisor
and
Donald W. McAndrew, Assistant Snow Survey Supervisor
Fort Collins, Colorado

United States Department of Agriculture
Soil Conservation Service
and
Colorado Agricultural Experiment Station
Fort Collins, Colorado

State Engineer of Colorado
Denver, Colorado
and
State Engineer of New Mexico
Santa Fe, New Mexico

WATER SUPPLY OUTLOOK



THE MAP ON THIS PAGE INDICATES THE MOST PROBABLE WATER SUPPLY AS OF THE DATE OF THIS REPORT. ESTIMATES ASSUME AVERAGE CONDITIONS OF SNOW FALL, PRECIPITATION AND OTHER FACTORS FROM THIS DATE TO THE END OF THE FORECAST PERIOD. AS THE SEASON PROGRESSES ACCURACY OF ESTIMATES IMPROVE. IN ADDITION TO EXPECTED STREAMFLOW, RESERVOIR STORAGE, SOIL MOISTURE IN IRRIGATED AREAS, AND OTHER FACTORS ARE CONSIDERED IN ESTIMATING WATER SUPPLY. ESTIMATES APPLY TO IRRIGATED AREAS ALONG THE MAIN STREAMS AND MAY NOT INDICATE CONDITIONS ON SMALL TRIBUTARIES.



WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

as of

March 1, 1967



COLORADO -- Much of Colorado's snow pack remained the same as last month. The Rio Grande dropped from normal to about 80% while the South Platte increased from 70 to 85%. The rest of the state remains near the 1948-62 average. A large part of the state experienced above seasonal temperatures during the month with considerable wind.

Valley soils are generally dry with only a few areas on the Yampa and White Drainages indicating good soil moisture conditions. Mountain soil moisture is about normal throughout the high elevations of the state.

Carry-over reservoir storage is considerably poorer than last year, but not dangerously low.

About three-fourths of the snow season has passed, but several big snows could materialize in the next two months. Considerably more snow is needed to insure Colorado's water users adequate supplies this summer.



NEW MEXICO -- Water supply prospects are very dim for New Mexico water users especially on the Rio Grande. Snow in many places is near the minimum of record. In addition, snow in the headwaters area of the Rio Grande in Colorado dropped off this month and is now below normal. Unless the next 45 days produce much above normal snowfall, New Mexico could be in for a very dry summer.

Reservoir storage is near normal on the Rio Grande, Canadian and Pecos Drainages. Navajo Reservoir on the San Juan now contains 370,700 acre-feet.

Mountain soils are reported to be in poor condition over most of the state.

Forecasts range from a high of 72% of normal on the Chama to a low of 33% on the Lower Rio Grande.

Forecasts are made assuming normal precipitation for the remainder of the forecast period.

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WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

WATERSHED I

SOUTH PLATTE RIVER WATERSHED

Describes water supply conditions in Fort Collins, Big Thompson, Longmont, Boulder Valley, Jefferson, Teller-Park, Douglas County, Morgan, Kiowa, West Arapahoe, West Adams, East Adams, Platte Valley, Southeast Weld, and West Greeley Soil Conservation Districts.

WATERSHED II

ARKANSAS RIVER WATERSHED

Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Horse-Rush Creek, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewall, Spanish Peaks, Purgatoire, Branson Trinchera, Western Baca County, Southeastern Baca County, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, West Otero, East Otero, and Big Sandy Soil Conservation Districts.

WATERSHED III

RIO GRANDE WATERSHED (COLORADO)

Describes water supply conditions in Rio Grande, Center, Mosca Hooper, Mt. Blanca, Sanches, and Culebra Soil Conservation Districts.

WATERSHED IV

RIO GRANDE WATERSHED (NEW MEXICO)

Describes water supply conditions in Lower Cebolla, Abiquiu-Vallejos, Eastern Taos, Lindrith, Coyote-Canones, Espanola Valley, Pojoaque, Jemez, Santa Fe-Sandoval, Tijeras, Cuba, and Englewood Soil Conservation Districts.

WATERSHED V

DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED

Describes water supply conditions in San Miguel Basin, Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, and Glade Park Soil Conservation Districts.

WATERSHED VI

GUNNISON RIVER WATERSHED

Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.

WATERSHED VII

COLORADO RIVER WATERSHED

Describes water supply conditions in DeBeque, Lower Grand Valley, Bookcliff, Eagle County, Middle Park, Glade Park, Upper Grand Valley, Plateau Valley, South Side, and Mt. Sopris Soil Conservation Districts.

WATERSHED VIII

YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED

Describes water supply conditions in Yampa, Moffat, West Routt, East Routt, North Park, Upper White River, Lower White River, and Douglas Creek Soil Conservation Districts.

WATERSHED IX

LOWER SOUTH PLATTE RIVER WATERSHED

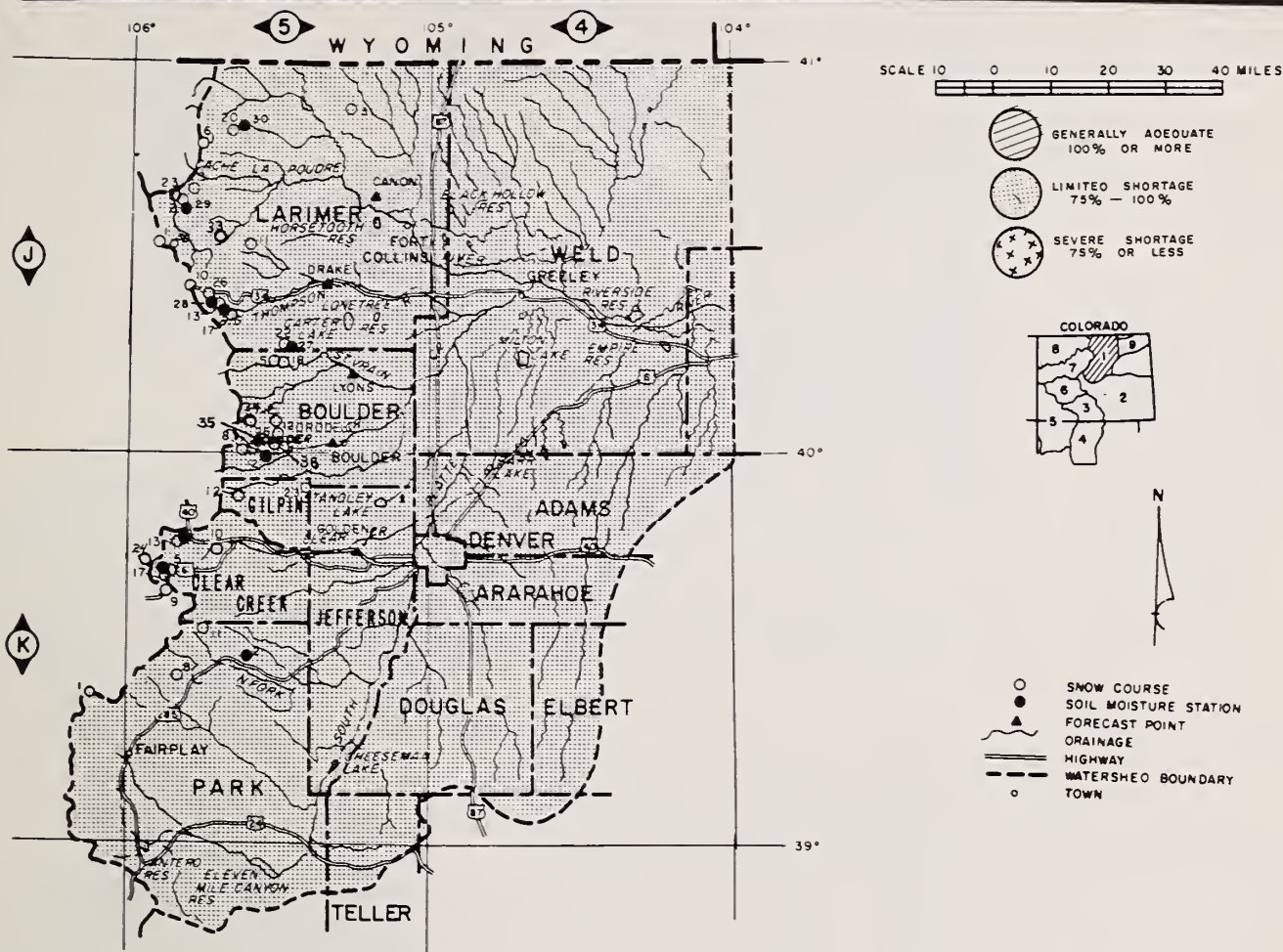
Describes water supply conditions in Sedgwick, South Platte, Haxton Peetz, Padroni, Morgan, Rock Creek and Yuma Soil Conservation Districts.

WATERSHED I

WATER SUPPLY OUTLOOK
FOR THE SOIL CONSERVATION DISTRICTS IN THE
SOUTH PLATTE RIVER WATERSHED IN COLORADO
as of

March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Water supply outlook for the South Platte and its tributaries, brightened slightly during February, but considerably more snow is needed to insure adequate water this summer.

Overall, the snow pack stands at 85% of the 1948-62 average.

The Cache La Poudre River has about 90% snow cover. The St. Vrain, Big Thompson and Boulder Creeks about 75% and the Clear about 85% of the 15 year average.

Small irrigation reservoirs in the area contain just slightly less than normal storage. The Big Thompson project has 75% of normal carry-over. These reservoirs will provide good supplemental water, but not as effective as last year.

Mountain soils are drier than normal particularly on the Cache La Poudre and Big Thompson Drainages. Valley soils are in poor condition. Unless spring rains materialize, most of the crops will have to be irrigated up.

Much more snow is needed to insure adequate water this summer.

Forecasts range from a high of 93% of normal on the Clear to 78% on the St. Vrain. The remainder of the South Platte tributaries will flow around 85%.

Forecasts are based on normal precipitation for the remainder of the forecast period. Additional snow can be expected through March and April.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

E. A. Nicholson, Area Conservationist,
Littleton, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION		PAST RECORD	
Snow Course	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
				Last Year	Avg. 48-62
South Platte River & Tributaries					
Baltimore	2/28	16	4.8	6.5	- -
Berthoud Falls	2/28	39	9.5	9.2	13.0*
Big South	2/25	9	2.4	1.3	2.5
Boulder Falls	2/27	31	8.3	7.4	9.9*
Cameron Pass (A)	2/25	69	21.6	15.2	19.2
Chambers Lake	2/25	26	7.0	4.3	7.8
Copeland Lake	2/27	14	3.7	2.4	4.5*
Deadman Hill (A)	2/28	44	12.0	12.0	12.9
Deer Ridge	2/28	15	3.3	3.4	4.7*
Empire	2/28	21	6.8	4.6	6.5*
Geneva Park	2/28	18	3.8	2.1	3.7*
Grizzly Peak (B)	2/28	53	14.3	8.8	15.0
Hidden Valley	2/28	27	6.5	5.9	9.4
Hoosier Pass	2/27	41	9.7	5.6	11.1
Hour Glass Lake	2/27	20	4.4	3.3	6.0
Jefferson Creek	2/23	32	7.3	5.1	8.0*
Lake Irene (B)	EST	63	19.5	16.5	20.0
Long's Peak	2/26	33	8.5	6.1	9.8*
Lost Lake	2/25	39	9.1	5.9	10.8*
Loveland Lift No. 1	2/28	67	19.8	13.8	- -
Loveland Pass	2/28	48	13.4	8.8	13.1
Pine Creek	2/29	5	1.4	1.2	- -
Red Feather	2/27	20	5.2	3.2	6.5*
Two Mile	2/28	44	8.3	8.3	12.6*
University Camp	2/27	43	11.4	8.7	17.6
Ward	2/27	18	3.5	2.9	5.4*
Wild Basin	2/27	32	9.0	7.6	11.9

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Antero	33.0	14.9	15.9	13.4
Barr Lake	32.2	13.0	27.2	20.5
Black Hollow	8.0	3.3	4.1	3.1
Boyd Lake	58.1	28.2	41.2	18.6
Cache LaPoudre	9.5	8.3	8.3	6.6
Carter Lake	108.9	77.8	108.1	63.0
Chambers Lake	8.8	2.8	5.0	2.2
Cheeseman	79.0	29.6	79.1	49.8
Cobb Lake	34.3	0	7.4	9.3
Eleven Mile	81.9	90.4	87.9	74.2
Fossil Creek	11.6	6.2	9.9	6.0
Gross	43.1	25.3	33.6	- -
Halligan	6.4	3.1	6.1	2.9
Horsetooth	143.5	83.8	95.5	69.5
Lake Loveland	13.6	3.6	8.3	6.3
Lone Tree	9.2	4.1	7.8	5.8
Mariano	5.4	4.5	5.1	2.7
Marshall	10.3	1.2	6.4	2.5
Marston	18.9	15.5	15.0	13.8
Milton	24.4	6.0	13.7	10.7
Standly	18.5	8.2	18.3	10.2
Terry Lake	8.2	4.4	5.9	4.6
Union	12.7	6.3	12.7	7.6
Windsor	18.6	4.4	11.8	8.6

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period April - Sept.	This Year % of Avg.	Avg. 1948-1962
Big Thompson at Drake (2)	90	82	110
Boulder at Orodell	48	89	54
Cache La Poudre at Canon Mouth (1)	200	81	246
Clear Creek at Golden (3)	125	93	134
Saint Vrain at Lyons	62	78	80

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Alpine Camp	10/10	6.9	3.7	5.5	3.6
Beaver Dam	11/30	7.1	2.9	5.5	3.9
Clear Creek	10/3	9.5	7.1	8.0	9.0
Feather	10/11	10.1	3.9	5.1	4.6
Guard Station	10/30	6.9	2.5	5.0	3.4
Hoop Creek	11/8	4.9	3.0	3.6	2.8
Hoosier Pass	11/15	7.8	4.1	4.8	5.0
Kenosha Pass	11/15	4.4	2.1	3.1	2.6
Laramie Road	10/11	12.4	8.6	11.9	7.9
Two Mile	11/30	9.1	4.1	6.5	5.6

ALL PROFILES 4 FEET DEEP

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DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Snow Survey
Colorado State University
Fort Collins, Colorado

OFFICIAL BUSINESS

- (1) Observed flow minus diversions from Michigan, Colorado and Laramie Rivers, plus diversions for irrigation and municipal use above station.
- (2) Observed flow plus by-pass to power plants.
- (3) Observed flow minus diversions through Jones Pass.

NOTE: * - 1948-62 (adjusted average)
NS - NO SURVEY
(A) - AIR OBSERVED
(B) - ON ADJACENT DRAINAGE

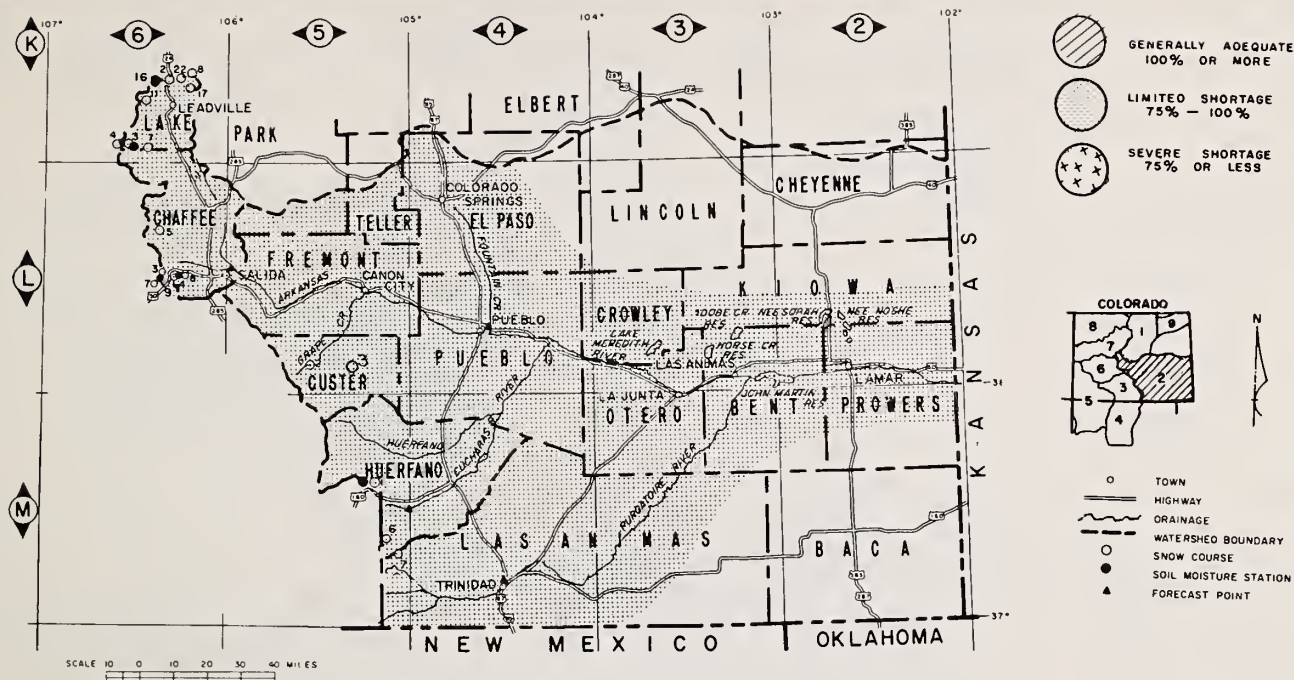
This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

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WATERSHED II

WATER SUPPLY OUTLOOK
FOR THE SOIL CONSERVATION DISTRICTS IN THE
ARKANSAS RIVER WATERSHED IN COLORADO
as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Current snow pack on the Arkansas Drainage is about 90% of normal. The high elevation snow is slightly better than normal, but the low snow is below average. The area around LaVeta Pass is particularly low in snow.

Reservoir storage is relatively good and will be a good supplement this summer. John Martin contains 198,400 acre-feet as of this date.

Most irrigated areas are reporting only fair soil moisture conditions. This area also reports above seasonal temperatures. Mountain soils contain slightly more moisture than normal, but are much drier than last year at this time.

Streamflow on the Arkansas should be near normal this summer, but the tributaries to the South, Purgatoire and Cucharas, should only flow about 75% of the 1948-62 average.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

Will D. McCorkle, Area Conservationist,
La Junta, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION			PAST RECORD	
Snow Course	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)		
				Last Year	Avg. 48-62	
Arkansas River						
Bigelow Divide	2/27	17	3.0	2.9	- -	
Blue Lakes	Destroyed			1.9	- -	
Bourbon	2/27	26	5.8	4.6	6.7	
Cooper Hill	2/27	40	9.9	6.4	- -	
Cucharas Pass	2/24	19	3.9	4.5	- -	
East Fork	2/24	35	8.5	5.5	8.4*	
Four Mile Park	2/29	23	6.5	3.9	4.5	
Fremont Pass	2/24	56	13.9	8.6	13.8	
Garfield	2/27	37	10.8	9.3	- -	
LaVeta Pass (B)	2/24	20	4.7	8.3	8.5	
Monarch Pass	2/27	40	11.7	9.2	15.6	
St. Elmo (A)	2/25	39	9.8	7.0	10.7*	
Tennessee Pass	2/29	38	9.3	6.4	8.7	
Tomichi	2/27	33	9.6	7.4	- -	
Twin Lakes Tunnel	2/27	35	10.0	6.0	9.7	
Westcliffe	2/27	25	6.0	5.7	5.5*	

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Adobe Creek	61.6	28.0	57.1	13.9
Clear Creek	11.4	70.8	11.2	5.4
Cucharas	40.0	1.5	0	5.3
Great Plains	150.0	48.4	65.2	45.3
Horse Creek	26.9	8.3	23.2	6.0
John Martin	366.6	198.4	375.5	77.7
Meredith	41.9	6.9	26.2	10.2
Model	15.0	1.4	3.9	2.6
Sugar Loaf	17.4	9.2	15.5	7.0
Twin Lakes	57.9	17.9	52.2	19.7

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg. 1948-1962
	April - Sept.	% of Avg.	
Arkansas at Pueblo (4)	310	96	323
Arkansas at Salida (4)	330	96	345
Cucharas nr LaVeta	10	71	14
Purgatoire at Trinidad	25	76	45

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Garfield	11/7	6.7	4.4	6.1	3.6
King	11/7	3.3	1.6	3.0	1.9
LaVeta Pass	12/7	11.9	7.5	10.6	6.9
Leadville	10/3	7.8	3.7	5.6	4.1
Twin Lakes Tunnel	11/3	4.5	2.6	3.6	2.2

ALL PROFILES 4 FEET DEEP

(4) Observed flow plus change in Clear Creek, Twin Lakes, and Sugar Loaf Reservoirs minus diversions through Busk-Ivanhoe and Twin Lake Tunnels and Ewing, Fremont Pass, Wurtz and Columbine Ditches.

NOTE: * - 1948-62 (adjusted averages)
 NS - NO SURVEY
 (A) - AIR OBSERVED
 (B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

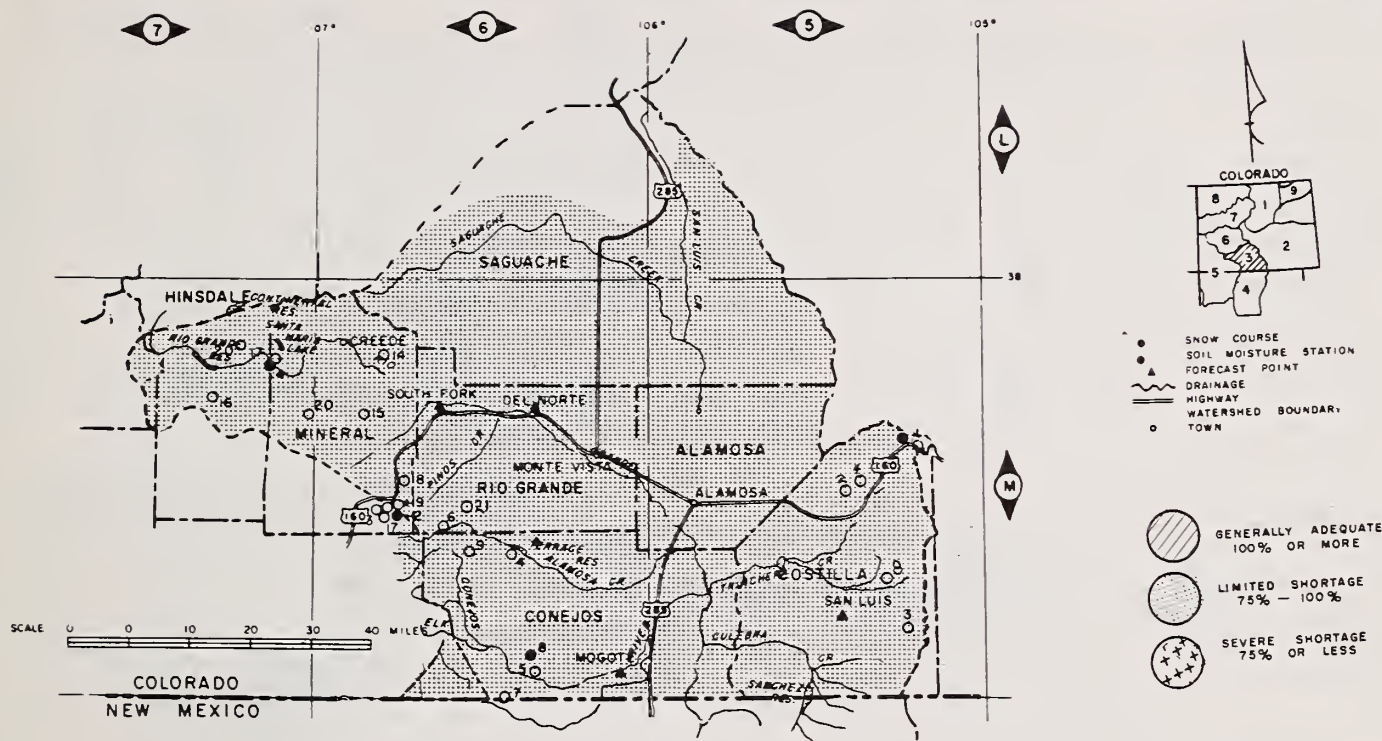
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WATERSHED III

WATER SUPPLY OUTLOOK
FOR THE SOIL CONSERVATION DISTRICTS IN THE
UPPER RIO GRANDE WATERSHED IN COLORADO
as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Snowfall during the month was considerably below normal over most of the Rio Grande Basin. Total snow pack is now below normal on all major basins except the Conejos. There the snow pack is slightly above average. Snow on the mainstem of the Rio Grande is 86% of the 1948-62 average while on the Alamosa and Sangre De Christo streams, it is only 75%.

Carry-over storage is much below last year at this time and only 80% of the 15 year normal.

Mountain soil moisture is nearly normal, but less than last year at this time. Valley soils are reported in fair condition.

Much additional snow is needed to insure adequate water this summer. Two months remain to increase the snow pack. Summer flows are expected to be about 80% of the 1948-62 average for all major streams in the Rio Grande Basin.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

R. K. Griffin, Area Conservationist,
Durango, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION			PAST RECORD	
Snow Course		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Avg. 48-62
<u>Rio Grande in Colorado</u>						
Cochetopa Pass		2/23	12	2.0	3.0	4.9*
Hiway		2/27	59	20.1	24.2	21.6*
Lake Humphreys	(A)	2/27	12	3.4	8.0	6.6*
Pass Creek		2/27	33	9.2	13.8	10.2*
Pool Table	(A)	2/27	16	3.6	9.3	5.5*
Porcupine	(A)	2/27	32	7.3	8.8	9.6*
Red Mountain Pass	(B)	2/27	71	21.0	22.8	26.0*
Santa Maria		2/26	20	4.5	4.9	5.0
Upper Rio Grande		2/27	25	5.1	8.0	7.9
Wolf Creek Pass		2/27	71	25.1	28.9	25.6
Wolf Creek Summit	(B)	2/27	68	23.7	29.6	23.2
<u>Alamosa River</u>						
Silver Lakes		2/24	22	5.3	5.5	6.6
Summitville	(A)	2/27	37	11.8	21.4	15.5
<u>Conejos River</u>						
Cumbres Pass	(A)	2/27	60	19.8	23.0	17.0
Platoro	(A)	2/27	54	17.3	18.2	13.5*
River Springs		2/27	23	4.8	5.3	7.1
<u>Sangre De Cristo Range</u>						
Blue Lakes	(B)	Destroyed			1.9	- -
Cucharas Pass	(B)	2/24	19	3.9	4.5	- -
Culebra	(A)	2/27	30	7.5	9.4	8.5
LaVeta Pass		2/24	20	4.7	8.3	8.5

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Alberta Park	12/5	8.2	3.9	8.2	5.0
Bristol View	NS	6.1		4.9	4.0
LaVeta Pass	12/7	11.9	7.5	10.6	6.9
Mogote	12/7	10.7	5.9	6.7	5.4

ALL PROFILES 4 FEET DEEP

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Continental	26.7	4.7	8.9	5.4
Platoro	60.0	3.0	17.3	- -
Rio Grande	45.8	9.1	36.3	13.0
Sanchez	103.2	9.1	15.2	10.2
Santa Maria	45.0	3.1	18.1	6.8
Terrace	17.7	5.4	10.8	3.0

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg. 1948-1962
	April - Sept.	% of Avg.	
Alamosa ab Terrace	55	81	68
Conejos nr Mogote	158	81	196
Culebra at San Luis (6)	18	86	21
Rio Grande at 30 Mile Bridge (5)	110	82	132
Rio Grande nr Del Norte (5)	375	76	492
South Fork at South Fork	100	82	122

- (5) Observed flow plus change in storage in Santa Maria, Rio Grande and Continental Reservoir.
 (6) Observed flow plus changes in storage in Sanchez Reservoir.

NOTE: * - 1948-62 (adjusted averages)
 NS - NO SURVEY
 (A) - AIR OBSERVED
 (B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

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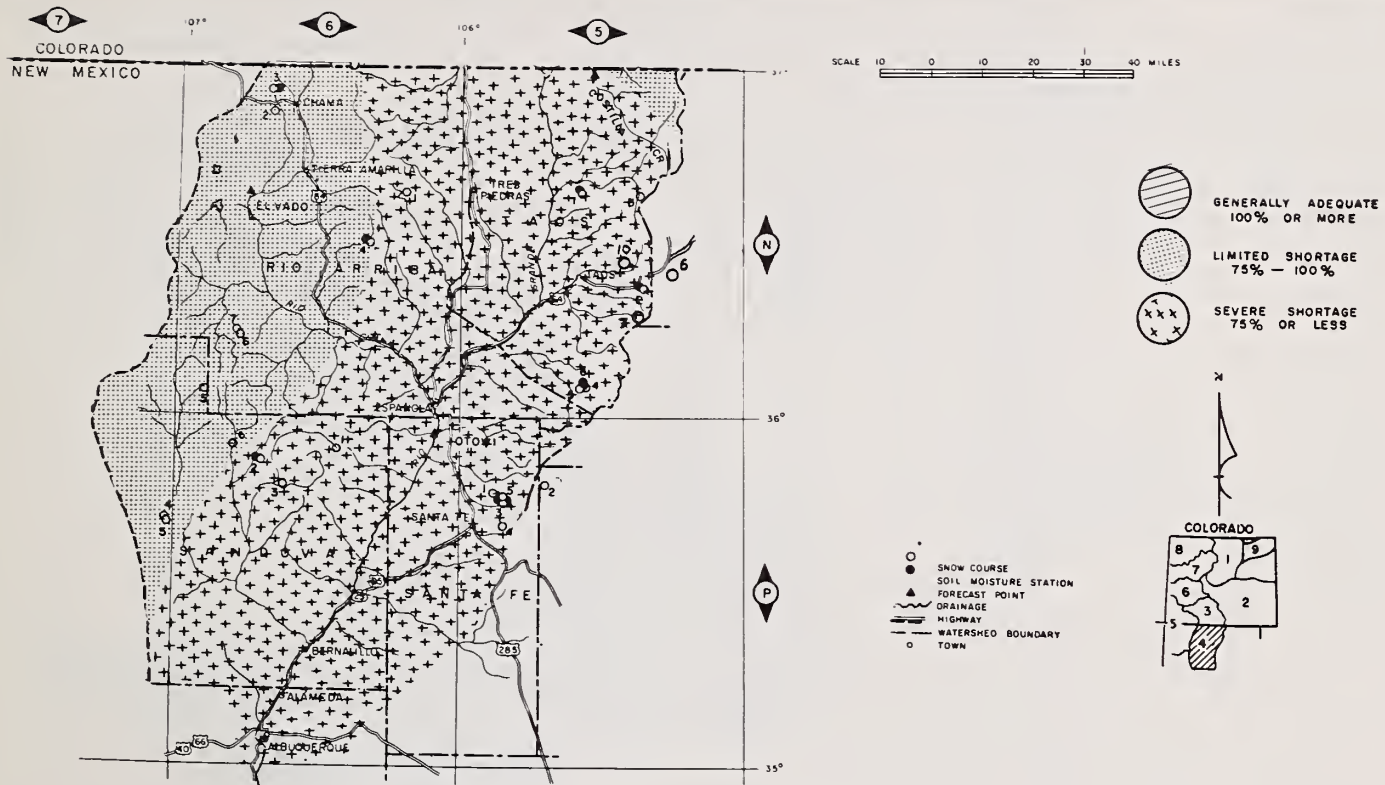
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WATERSHED IV

as of

March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



This year water conservation will be an absolute necessity for anyone depending on direct flow of the Rio Grande or its tributaries. Many of the smaller tributaries to the Rio Grande will have about one-half of their normal water production. People using water from these smaller streams should plan on a short water season. Many of these streams will probably return to base flow near the first of July.

Snow courses in New Mexico are near a minimum of record. For the most part only 1951 and 1959 had less snow than that received this season. Snowfall during February was almost non-existent over the entire basin. The headwaters area in Colorado also suffered materially, here the snow pack dropped from normal on February 1st to 85% now. The snow pack in the mountains along the Rio Grande is currently only 45% of average.

Water held in storage in the major reservoirs remain near normal throughout the basin. Elephant Butte and Caballo Reservoirs contain 450,000 acre-feet as of March 1. Conchas Reservoir on the Canadian Drainage contains 191,000 acre-feet. Reservoir storage on the Pecos Drainage is average.

The mountain soils are dry. Some of the much needed snow water will be taken up before it even reaches the streams. Valley soils are also reported as dry.

Most of the snow season has passed, but one or two good snow storms during March would be a great help. If the remainder of the spring season produces near normal precipitation, the Rio Grande will flow about one-half of average in the North to only one-third normal in the lower reaches.

Issued By: Soil Conservation Service

Einar L. Roget, State Conservationist,
Albuquerque, New Mexico

Walter B. Rumsey, Area Conservationist,
Santa Fe, New Mexico

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION			PAST RECORD	
Snow Course		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Avg. 48-62
<u>Rio Grande (Colorado)</u>						
Culebra	(A)	2/27	26	6.0	9.4	8.5
Cumbers Pass	(A)	2/27	60	19.8	23.0	17.0
LaVeta Pass		2/24	20	4.7	8.3	8.5
Platoro	(A)	2/27	54	17.3	18.2	13.5
River Springs		2/27	23	4.8	5.3	7.1
Santa Maria		2/26	20	4.5	4.9	5.0
Silver Lakes		2/24	22	5.3	5.5	6.6
Summitville	(A)	2/27	37	11.8	21.4	15.5
Upper Rio Grande		2/27	25	5.1	8.0	7.9
Wolf Creek Pass		2/27	71	25.1	28.9	25.6
Aspen Grove (New Mexico)		NS				4.5
Bateman		2/24	29	7.0	9.1	9.8*
Big Tesuque		2/27	7	1.5	7.1	4.5
Blue Bird Mesa		2/27	5	1.5	5.8	- -
Capuline Peak		2/27	10	2.2	4.1	- -
Chama Divide		2/27	2	0.5	5.6	4.2
Chamita		2/27	22	4.5	10.0	9.0
Cordova	(A)	2/27	27	6.2	8.6	10.0
Elk Cabin		2/28	2	0.2	4.4	3.2
Fenton Hill		2/17	2	1.1	6.4	4.1*
Hematite Park		2/23	8	1.4	4.4	4.2
Mora View		2/24	0	0	2.0	- -
Pajarito Peak		2/27	0	0	1.8	- -
Panchuela		2/24	2	0.4	5.3	2.9
Payrole	(A)	2/27	17	3.6	8.8	9.0
Quemazon		2/28	20	4.1	8.5	7.4*
Red River		2/23	12	2.7	5.0	6.3
Rio En Medio		2/27	19	4.5	11.0	6.7*
Sandavol		2/28	5	0.9	6.7	- -
Taos Canyon		2/27	11	2.0	4.0	4.8
Tres Ritos		2/24	6	1.8	4.6	4.9
Twinning		2/27	19	5.7	10.6	- -

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Alamogordo	122.1	68.0	55.0	75.9
Caballo	344.0	97.5	83.7	116.7
Conchas	600.0	191.2	259.7	239.4
Elephant Butte	2206.8	352.1	537.7	389.1
El Vado	194.5	1.2	2.0	17.2
McMillan-Avalon	37.0	26.4	9.4	17.8
Red Bluff(Tex)	307.0	183.0	51.6	71.8

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST(1,000 Acre-Feet)

Stream and Station	Forecast as Indicated	This Year % of Avg.	Avg. 1948 - 62
Costilla at Costilla (8)	14 AS	56	25
Pecos at Pecos	20 AS	38	53
Rio Chama nr La Puente	155 AS	72	214
Rio Grande at Otowi (7)	325 MJ	53	609
Rio Grande at San Marcial (7)	140 MJ	33	424
Rio Hondo nr Valdez	12 AS	66	18
Red River at Questa	11 AJ	44	25

The Forecast of the Rio Grande at San Marcial is 20 % of the Average used by the Elephant Butte Irrigation District.

A-S is April through September.

A-J is April through July.

M-J is March through July.

(7) Observed flow plus changes in storage in El Vado and Abiquiu Reservoirs.

(8) Observed flow plus changes in storage in Costilla Reservoir.

NOTE: * - 1948-62 (adjusted averages)

NS - NO SURVEY

(A) - AIR OBSERVED

(B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
<u>Colorado</u>					
Alberta Park	12/15	8.2	3.9	8.2	5.0
Bristol View		6.1		4.9	4.0
Mogote	12/7	10.7	5.9	6.7	5.4
<u>New Mexico</u>					
Aqua Piedra	2/27	7.2	4.8	3.8	3.7
Bateman	2/24	6.7	4.6	4.8	2.6
Big Tesuque	NS	3.7	NS	1.9	1.7
Chamita	2/27	8.0	5.2	8.0	3.7
Fenton Hill	NS	6.5	NS	6.5	4.5
Red Summit	2/23	4.8	1.5	1.5	2.1
Rio En Medio	2/27	3.5	1.1	1.6	1.1
Taos Canyon	2/27	3.3	2.0	2.5	2.3

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ALL PROFILES 4 FEET DEEP

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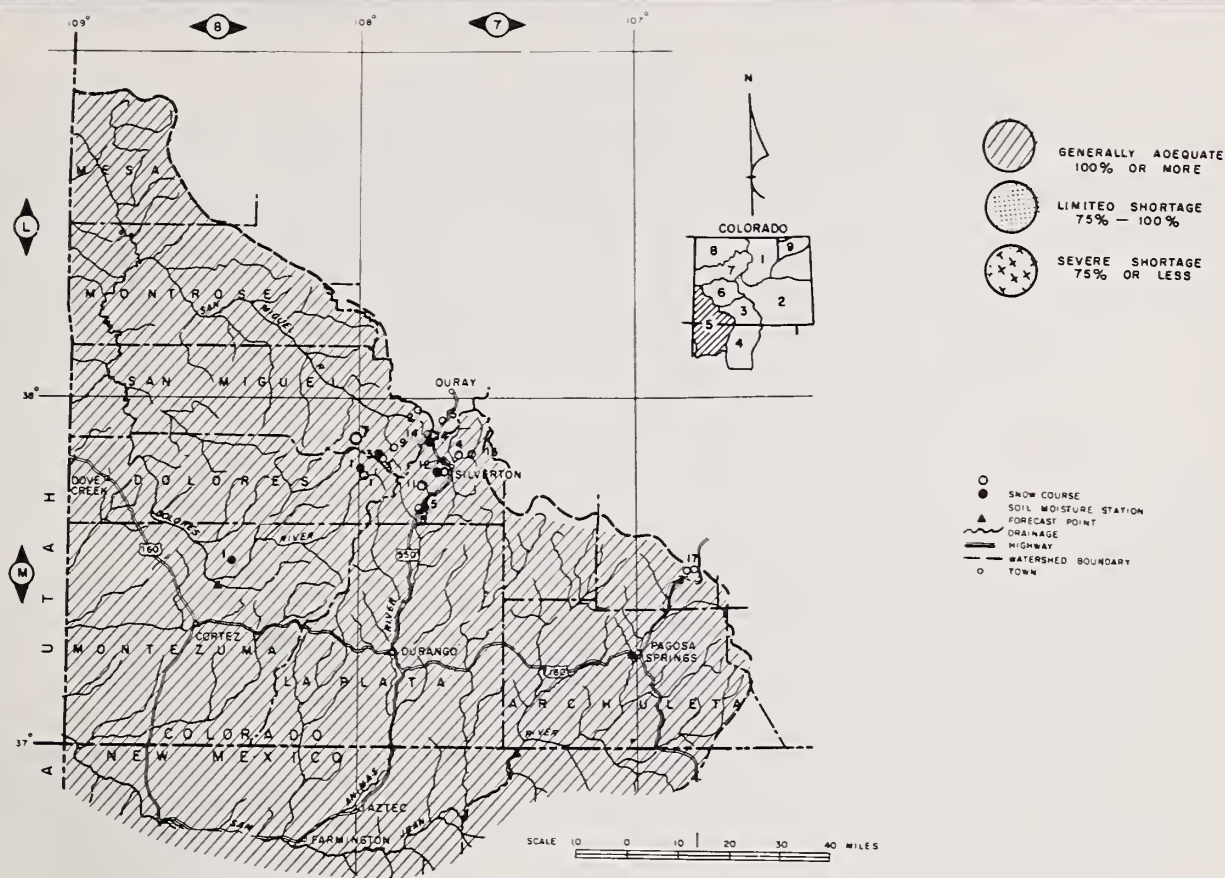
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WATER SUPPLY OUTLOOK WATERSHED V
FOR THE SOIL CONSERVATION DISTRICTS IN THE
SAN MIGUEL - DOLORES - ANIMAS - SAN JUAN
WATERSHEDS IN COLORADO AND NEW MEXICO

as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Water supply outlook in this area is not quite as good as last month. Snowfall was very low during the month. Even the high elevation snow courses only gained 3 inches of water during February. The Wolf Creek Pass Snow Course has gained as much as 13 inches in some years. The San Juan Basin now has only 88% of normal snow pack while the Animas and Dolores Basins have about 93% of average.

Carry-over storage in Vallecito and Groundhog Reservoirs is slightly better than normal. Soil moisture conditions in the irrigated areas are listed as fair. Mountain soil moisture is about average for this time of year.

Forecasts on all major streams are for near normal flows this summer.

Additional snow is needed during the next two months to insure adequate water this summer.

Issued By: Soil Conservation Service

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D. B. Beach, Area Conservationist,
Grand Junction, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION			PAST RECORD	
Snow Course		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Avg. 48-62
<u>San Juan River</u>						
Chama Divide	(B)	2/27	2	0.5	5.6	4.2
Chamita	(B)	2/27	22	4.5	10.0	9.0
Upper San Juan		2/27	74	26.0	31.8	28.2
Wolf Creek Pass	(B)	2/27	71	25.1	28.9	25.6
Wolf Creek Summit		2/37	68	23.7	29.6	23.2
<u>Animas River</u>						
Cascade		2/27	34	10.6	12.8	11.9
Howardville		Destroyed			11.2	9.7*
Ironton Park	(B)	2/27	41	10.8	9.5	10.7
Mineral Creek		2/27	46	12.3	11.5	13.2*
Molas Lake		2/27	44	12.6	13.5	12.7*
Red Mountain Pass		2/27	71	21.0	22.8	26.0*
Silverton Sub-Station		2/27	28	7.9	9.7	5.6
Spud Mountain		2/27	56	19.0	24.2	21.7*
<u>Dolores River</u>						
Lizzard Head		2/27	49	14.6	15.5	13.2
Rico		2/27	19	4.9	8.2	8.0
Telluride		2/24	21	5.1	5.8	6.7
Trout Lake		2/24	42	12.1	11.0	11.5*

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Groundhog	21.7	7.7	18.5	6.0
Navajo	1036.0	370.0	216.5	- -
Vallecito	126.3	52.1	74.9	46.4

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg. 1948-1962
	April - Sept.	% of Avg.	1962
Animas at Durango	410	90	456
Dolores at Dolores	245	94	260
La Plata at Hesperus	24	89	27
Los Pinos at Bayfield (9)	185	84	220
Piedra Creek nr Piedra	155	85	182
San Juan at Rosa (9)	500	84	597

(9) Observed flow plus changes in storage in Vallecito Reservoir.

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Cascade	11/14	9.1	4.6	7.6	6.5
Dolores	11/14	19.6	12.5	9.8	5.2
Lizzard Head	11/14	11.8	8.1	8.3	8.4
Mineral Creek	11/14	5.7	3.0	4.8	3.7
Molas Lake	11/14	9.4	5.0	7.9	4.4
Rico	11/14	13.8	9.9	13.5	9.7

ALL PROFILES 4 FEET DEEP

NOTE: * - 1948-62 (adjusted averages)
NS - NO SURVEY
(A) - AIR OBSERVED
(B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

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WATER SUPPLY OUTLOOK WATERSHED VI
FOR THE SOIL CONSERVATION DISTRICTS IN THE
GUNNISON RIVER WATERSHED IN COLORADO
as of

March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Eighteen snow courses in the Gunnison Drainage indicate an almost exactly normal snow pack. The Uncompahgre has slightly less snow with 93%. The Grand Mesa snow is high as well as the area immediately to the East.

Taylor Park Reservoir now contains 44,500 acre-feet compared to last year's 80,000 acre-feet and a normal of 56,600 acre-feet.

Four mountain soil moisture stations indicate near normal moisture, however, much below last year at this time.

Valley soils around Montrose are in good condition. Gunnison reports poor to fair soil moisture.

The April-September flow of the Gunnison at Grand Junction should be 1,260,000 acre-feet or 97% of the 15 year normal, if the remainder of the season produces near normal precipitation. Surface Creek and the Uncompahgre should flow better than normal this year.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

Dearl Beach, Area Conservationist,
Grand Junction, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW		CURRENT INFORMATION			PAST RECORD	
Snow Course		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Avg. 48-62
<u>Gunnison River</u>						
Alexander Lakes	(A)	2/27	64	19.2	18.6	17.8
Black Mesa		NS			14.5	- -
Blue Mesa		2/27	22	5.8	6.5	6.5*
Butte		2/27	49	13.9	11.6	- -
Cochetopa Pass		2/23	12	2.0	3.0	4.9*
Crested Butte		2/23	44	11.7	9.8	12.1
Keystone		2/23	65	19.9	14.1	- -
Lake City		2/24	23	4.6	5.0	8.0
Long Gulch		NS			8.4	- -
Mesa Lakes	(B)	2/23	49	15.3	14.9	14.3
Monarch Pass	(B)	2/27	40	11.7	9.2	15.6
McClure Pass	(A)	2/27	64	19.7	17.7	15.5*
Mineral Creek	(B)	2/27	48	12.3	11.5	13.2*
North Lost Trail	(A)(B)	2/27	65	19.0	13.9	13.7
Park Cone		2/24	42	11.1	7.8	9.7
Park Reservoir	(A)	2/27	72	22.3	22.3	21.1
Porphyry Creek		2/27	42	11.6	10.7	14.5
Tomichi		2/27	33	9.6	7.4	- -
Trickle Divide	(A)(B)	2/27	77	23.9	24.8	22.5
<u>Uncompahgre River</u>						
Ironton Park		2/27	41	10.8	9.5	10.7
Lizzard Head		2/27	49	14.6	15.5	13.2
Lone Cone		2/27	45	12.8	12.6	- -
Red Mountain Pass	(B)	2/27	71	21.0	22.8	26.0*
Telluride		2/24	21	5.1	5.8	6.7
Trout Lake		2/24	42	12.1	11.0	11.5*

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Taylor	106.2	44.5	80.0	56.6

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg.
	April - Sept.	% of Avg.	1948-1962
Gunnison nr Grand Jct.	1260	97	1305
Surface Creek nr Cedaridge	19	112	17
Uncompahgre at Colona	140	100	139

NOTE: * - 1948-62 (adjusted averages)
 NS - NO SURVEY
 (A) - AIR OBSERVED
 (B) - ON ADJACENT DRAINAGE

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Grand Mesa	11/14	12.5	7.9	12.5	-
King	11/7	3.3	1.6	3.0	1.9
Mineral Creek	11/14	5.7	3.0	4.8	3.7
Placita	11/14	9.3	4.6	8.4	5.2

ALL PROFILES 4 FEET DEEP

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

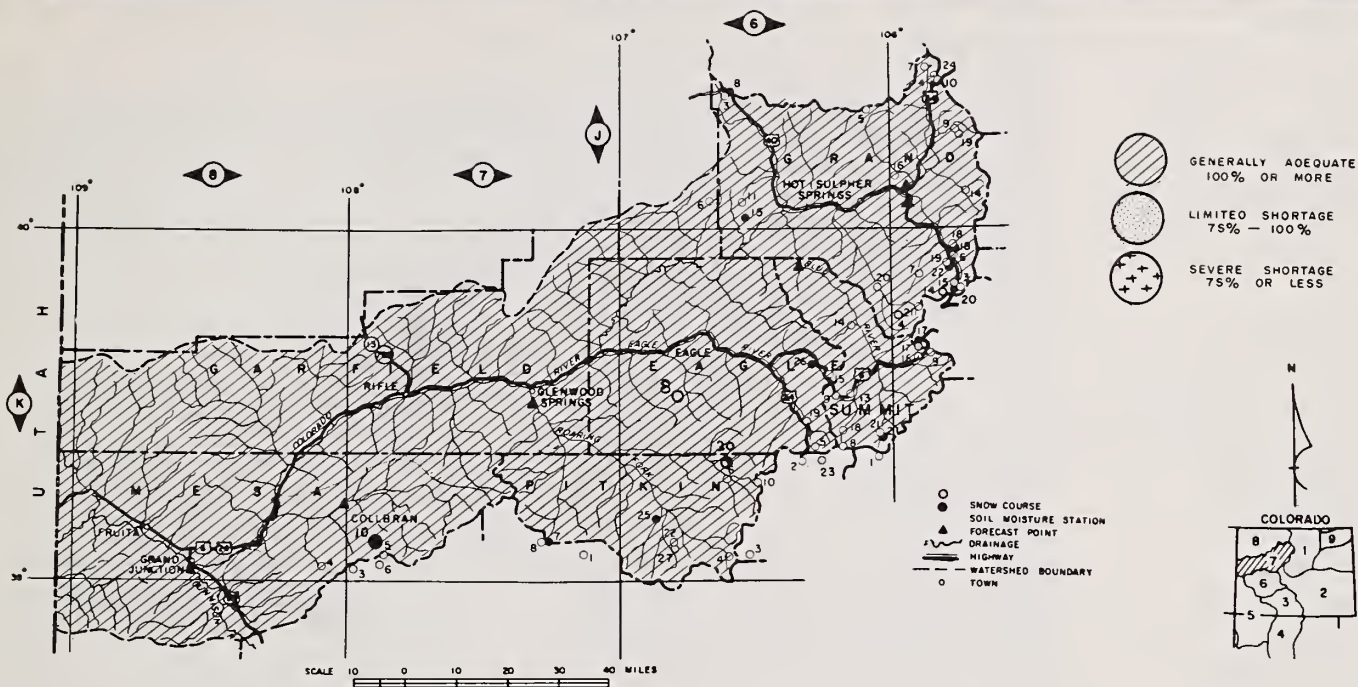
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WATERSHED VII

WATER SUPPLY OUTLOOK
FOR THE SOIL CONSERVATION DISTRICTS IN THE
COLORADO RIVER WATERSHED IN COLORADO
as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Snow pack over the Colorado River Drainage is 101% of average. The Roaring Fork Drainage has a 118% of normal snow pack, while the Grand Mesa area is 107%. Water users along the Colorado River's mainstem should have normal supplies this season. People using water originating in the Grand Mesa area will also have a normal supply this season.

Although reservoir storage has little importance in this area, it is considerably less than average for this date. Vega Reservoir contains only 6,800 acre-feet compared to 20,700 acre-feet last year. Green Mountain Reservoir contains 56,300 acre-feet of storage compared to an average of 73,900 acre-feet.

Mountain soils are drier than normal. Some of the water contained in the snow pack will be needed to fill these soils before runoff occurs this spring. This situation will probably retard runoff this spring.

Streamflow in the area will range from 89% of average on the Blue River to 115% on the Willow. The mainstem of the Colorado River is forecast to flow 107% near Granby, 103% at Glenwood Springs and 113% near Cameo. The Roaring Fork is forecast at 112% also.

The maximum snow build up is not usually reached until early April. Three to five inches of snow water over the entire watershed is needed during the next thirty days to maintain these above normal predictions.

Issued By: Soil Conservation Service

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D. B. Beach, Area Conservationist,
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R. L. Porter, Area Conservationist,
Glenwood Springs, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW

Snow Course	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
				Last Year	Avg. 48-62
<u>Colorado River</u>					
Arrow	2/23	43	10.9	7.6	9.5
Berthoud Pass	2/24	50	12.7	9.4	12.2
Berthoud Summit	2/28	53	16.0	9.2	16.5*
Blue River	2/27	31	7.4	4.2	7.5*
Cooper Hill	2/27	40	9.1	6.4	- -
Fiddlers Gulch	EST	50	15.0	8.0	14.9
Fremont Pass	2/24	56	13.9	8.6	13.8
Frisco	2/27	25	6.8	3.6	7.5*
Glen Mar Ranch	2/24	32	7.5	4.9	7.0
Gore Pass	2/23	34	8.3	5.2	9.1*
Granby	2/23	33	7.8	5.6	6.2*
Grand Lake	2/26	36	8.0	5.0	7.5*
Grizzly Peak	2/28	53	14.3	8.8	15.0
Hoosier Pass (B)	2/27	41	9.7	5.6	11.1
Jones Pass	2/24	51	13.1	8.3	10.9*
Lake Irene	EST	63	19.5	16.5	20.0
Lapland	2/28	34	9.3	5.9	10.0
Lulu	2/27	52	14.9	9.5	14.2
Lynx Pass	2/23	45	11.2	7.0	10.8
McKinzie Gulch	2/27	28	6.1	3.5	- -
Middle Fork Campground	2/24	34	8.6	7.4	8.0
Milner	NS			- -	
Monarch Lake	NS			4.0	10.7
North Inlet to Grand Lake	EST	35	8.5	5.3	8.3
Pando	2/24	33	8.1	6.5	9.1*
Phantom Valley	2/26	45	11.9	8.3	9.2
Ranch Creek	2/23	33	7.3	5.6	7.3*
Shrine Pass	2/27	53	15.1	9.5	14.6
Snake River	2/27	28	7.5	4.8	7.9*
Summit Ranch	EST	25	6.8	7.9	7.8*
Tennessee Pass	2/27	38	9.3	6.4	8.7
Vail Pass	2/27	48	12.9	10.8	16.0*
Vasquez Creek	2/27	43	9.7	6.9	10.4
Willow Creek Pass	2/28	46	12.6	8.9	11.0
<u>Roaring Fork River</u>					
Aspen	2/27	57	17.5	10.8	- -
Independence Pass Tunnel	2/26	51	15.1	11.3	14.9
Ivanhoe	2/27	59	15.1	9.3	15.6
Lift	2/27	59	18.0	11.3	13.9*
McClure Pass (A)	2/27	64	19.7	17.7	15.5*
Nast	2/26	34	7.6	3.8	6.3
North Lost Trail	2/27	65	19.0	13.9	13.7
<u>Plateau Creek</u>					
Alexander Lake (A)(B)	2/27	64	19.2	18.6	17.8
Mesa Lakes	2/23	49	15.3	14.9	14.3
Park Reservoir (A)(B)	2/27	72	22.3	22.3	21.1
Trickle Divide (A)	2/27	77	23.9	24.8	22.5

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Berthoud Pass	11/8	3.9	3.0	3.9	2.8
Blue River	11/15	4.2	2.0	3.5	2.9
Gore	11/8	4.9	2.3	3.1	2.6
Grand Mesa	11/14	12.5	7.9	12.5	- -
Muddy Pass	11/15	11.1	6.3	7.4	6.5
Placita	11/14	9.3	4.6	8.4	5.2
Ranch Creek	11/16	8.7	5.0	6.3	6.2
Vail	11/2	12.3	6.2	8.6	7.0
Vasquez Siphon	11/16	11.0	6.8	7.7	7.4

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SOIL CONSERVATION SERVICE

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Fort Collins, Colorado

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RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Granby	465.5	90.1	232.3	201.4
Green Mt.	146.9	56.3	80.7	73.9
Vega	32.9	6.8	20.7	- -
Williams Fork	96.8	3.1	26.3	
Dillon	254.0	214.0	243.6	

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period April - Sept.	This Year % of Avg.	Avg. 1948-1962
Blue River abv. Green Mountain (10)	245	89	274
Colo. River nr Granby (11)	250	107	233
Colo. River abov Glenwood Springs (12)	1600	103	1556
Roaring Fork at Glenwood Springs (14)	850	112	762
Williams Fork nr Parshall (15)	85	110	77
Willow abv Willow Cr.	55	115	48
Colo. nr Cameo (12)	2490	113	2213

- (10) Observed flow plus change in storage in Dillon Reservoir.
 (11) Observed flow diversions by Adams Tunnel and Grand River Ditch plus change in storage in Granby Reservoir.
 (12) Observed flow plus the changes as indicated in (11) plus Moffat Ditch.
 (14) Observed flow plus diversion through Twin Lakes Tunnel.
 (15) Observed flow plus diversions through Jones Pass Tunnel.

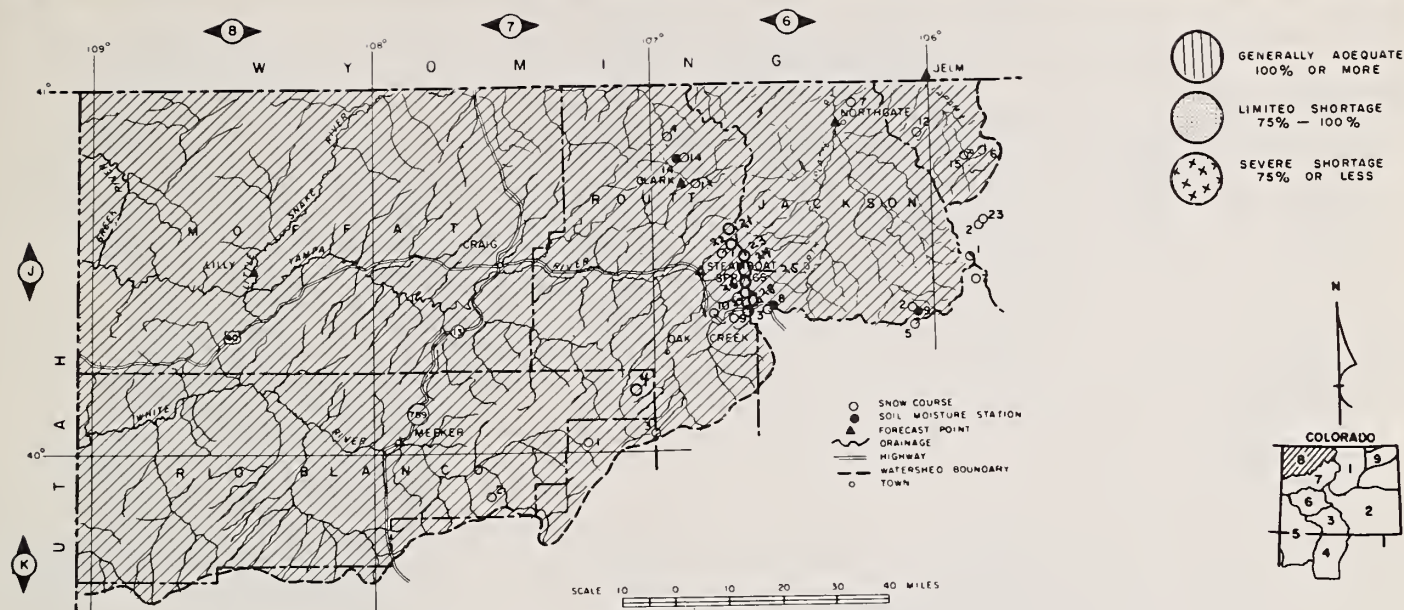
NOTE: * - 1948-62 (adjusted averages)
 NS - NO SURVEY
 (A) - AIR OBSERVED
 (B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Soil Conservation Service, Fort Collins, Colo.

POSTAGE AND FEES PAID
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WATER SUPPLY OUTLOOK WATERSHED VIII
FOR THE SOIL CONSERVATION DISTRICTS IN THE
YAMPA, WHITE, AND NORTH PLATTE
RIVERS WATERSHEDS IN COLORADO
as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



The snow pack improved slightly in all three basins during February. Snow on the North Platte is now 110% of normal, 97% on the Yampa and 90% on the White. Seventy-five percent of the annual snowfall should have fallen by now, however, considerable snow can fall between now and spring runoff.

Mountain soils contain less than normal moisture. This will tend to reduce summer runoff.

Valley soils are reported to be in good condition in the Steamboat Springs and Meeker areas. Dry lands to the North of Meeker are also in good condition.

All the major streams in the three basins are predicted to flow above or near average this year.

The Yampa River is forecast at 108% of average at Steamboat, and will flow 1,010,000 acre-feet at Maybell.

The Elk River and Little Snake River are forecast at 107% and 109% of average, respectively. The White River at Meeker will flow 300,000 acre-feet which is 90% of normal.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

R. L. Porter, Area Conservationist,
Glenwood Springs, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW

CURRENT INFORMATION

PAST RECORD

Snow Course		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Avg. 48-62
<u>North Platte River</u>						
Cameron Pass	(A)	2/25	69	21.6	15.2	19.2
Columbine Lodge		2/27	73	21.9	14.0	20.5
Deadman Hill	(A)	2/28	44	12.0	12.0	12.9
McIntyre	(B)	NS			-	-
Northgate		2/27	31	8.0	3.9	5.6*
Park View		2/28	35	9.4	6.3	7.9
Roach	(A)	2/28	48	15.8	10.5	16.2
Willow Creek Pass	(B)	2/28	46	12.6	8.9	11.0
<u>Yampa River</u>						
Bear River		NS			-	-
Clark	(A)	2/24	49	14.7	8.9	-
Columbine Lodge	(B)	2/27	73	21.9	14.0	20.5
Dry Lake	(A)	2/28	59	17.3	15.4	18.5
Elk River	(A)	2/24	64	19.2	12.4	15.9
Hahn's Peak		NS			-	-
Lynx Pass	(B)	2/23	45	11.2	7.0	10.8
Rabbit Ears		2/27	68	20.1	17.2	24.9
Yampa View		2/28	41	12.2	10.0	13.8*
<u>White River</u>						
Burro Mountain	(A)	2/27	52	14.6	13.3	15.7
Rio Blanco		2/27	42	11.8	13.0	13.6

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg.
	April - Sept.	% of Avg.	1948-1962
Elk at Clark	220	107	205
Laramie at Jelm	115	103	112
Little Snake at Lilly	350	109	321
White at Meeker	300	90	332
Yampa at Maybell	1010	109	923
Yampa at Steamboat Spr.	315	108	292

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Hahn's Peak	11/15	19.0	6.1	11.0	13.8
Laramie Road	10/11	12.4	8.6	11.9	7.9
Muddy Pass	11/15	11.1	6.3	7.4	6.5
Two Mile	11/30	9.1	4.1	6.5	5.6
Willow Pass	11/15	9.5	5.6	8.4	6.9

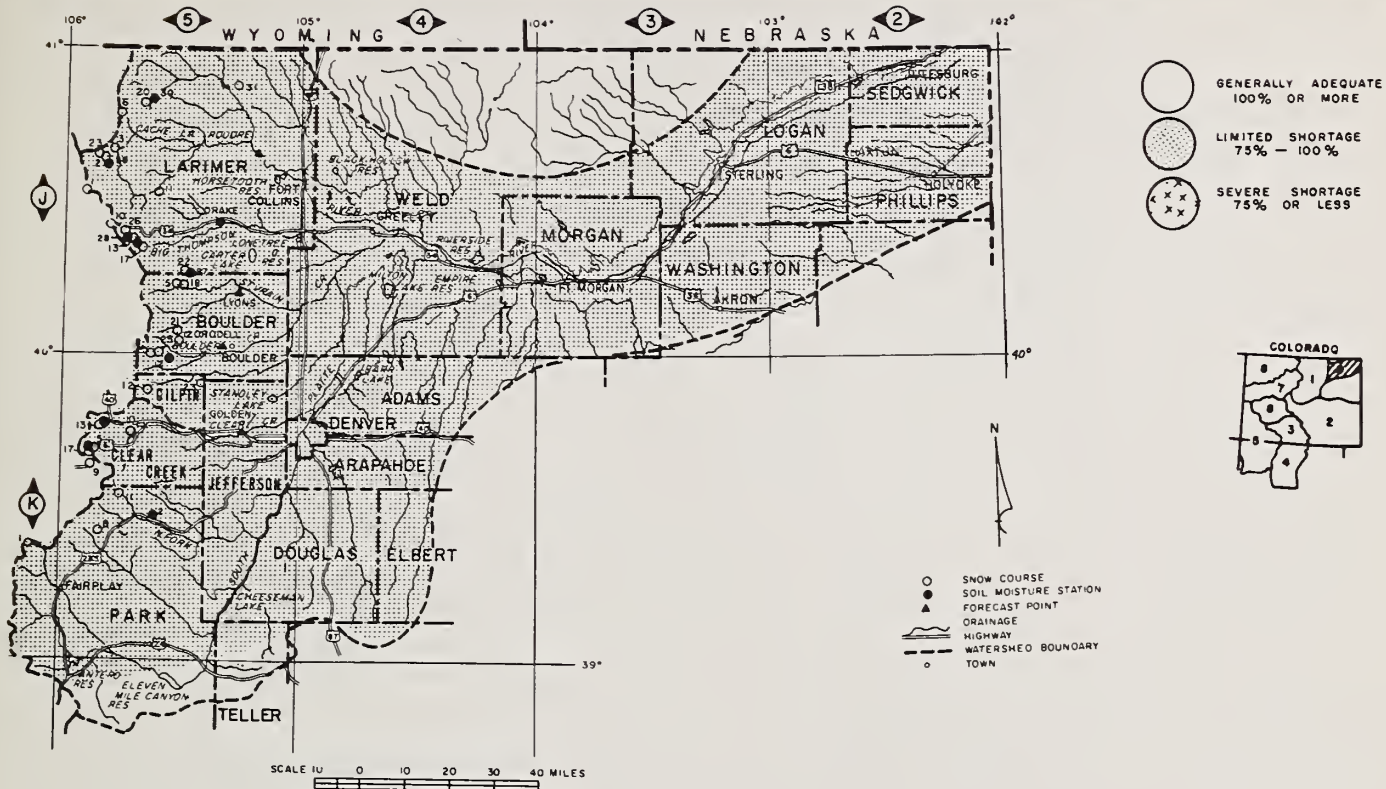
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WATERSHED IX

WATER SUPPLY OUTLOOK
FOR THE SOIL CONSERVATION DISTRICTS IN THE
LOWER SOUTH PLATTE RIVER WATERSHED IN COLORADO
as of
March 1, 1967

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
COLORADO EXPERIMENT STATION - STATE ENGINEERS OF COLORADO AND NEW MEXICO



Water supply outlook for the South Platte and its tributaries, brightened slightly during February, but considerably more snow is needed to insure adequate water this summer.

Overall, the snow pack stands at 85% of the 1948-62 average.

The Cache La Poudre River has about 90% snow cover. The St. Vrain, Big Thompson and Boulder Creeks about 75% and the Clear about 85% of the 15 year average.

Small irrigation reservoirs in the area contain just slightly less than normal storage. The Big Thompson project has 75% of normal carry-over. These reservoirs will provide good supplemental water, but not as effective as last year.

Mountain soils are drier than normal particularly on the Cache La Poudre and Big Thompson Drainages. Valley soils are in poor condition. Unless spring rains materialize, most of the crops will have to be irrigated up.

Much more snow is needed to insure adequate water this summer.

Forecasts range from a high of 93% of normal on the Clear to 78% on the St. Vrain. The remainder of the South Platte tributaries will flow around 85%.

Forecasts are based on normal precipitation for the remainder of the forecast period. Additional snow can be expected through March and April.

Issued By: Soil Conservation Service

F. A. Mark, State Conservationist,
Colorado

J. L. Hall, Area Conservationist,
Sterling, Colorado

"THE CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY"

SNOW

CURRENT INFORMATION

PAST RECORD

Snow Course	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
				Last Year	Avg. 48-62
South Platte River & Tributaries					
Baltimore	2/28	16	4.8	6.5	- -
Berthoud Falls	2/28	39	9.5	9.2	13.0*
Big South	2/25	9	2.4	1.3	2.5
Boulder Falls	2/27	31	8.3	7.4	9.9*
Cameron Pass (A)	2/25	69	21.6	15.2	19.2
Chambers Lake	2/25	26	7.0	4.3	7.8
Copeland Lake	2/27	14	3.7	2.4	4.5*
Deadman Hill (A)	2/28	44	12.0	12.0	12.9
Deer Ridge	2/28	15	3.3	3.4	4.7*
Empire	2/28	21	6.8	4.6	6.5*
Geneva Park	2/28	18	3.8	2.1	3.7*
Grizzly Peak (B)	2/28	53	14.3	8.8	15.0
Hidden Valley	2/28	27	6.5	5.9	9.4
Hoosier Pass	2/27	41	9.7	5.6	11.1
Hour Glass Lake	2/27	20	4.4	3.3	6.0
Jefferson Creek	2/23	32	7.3	5.1	8.0*
Lake Irene (B)	EST	63	19.5	16.5	20.0
Long's Peak	2/26	33	8.5	6.1	9.8*
Lost Lake	2/25	39	9.1	5.9	10.8*
Loveland Lift No. 1	2/28	67	19.8	13.8	- -
Loveland Pass	2/28	48	13.4	8.8	13.1
Pine Creek	2/29	5	1.4	1.2	- -
Red Feather	2/27	20	5.2	3.2	6.5*
Two Mile	2/28	44	8.3	8.3	12.6*
University Camp	2/27	43	11.4	8.7	17.6
Ward	2/27	18	3.5	2.9	5.4*
Wild Basin	2/27	32	9.0	7.6	11.9

RESERVOIR STORAGE (1,000 Acre-Feet)

Reservoir	Usable Capacity	This Year	Last Year	15 Year Average 1948-62
Carter	108.9	77.8	108.1	63.0
Cheeseman	79.0	29.6	79.1	49.8
Eleven Mile	81.9	90.4	87.9	74.2
Empire	37.7	28.9	24.4	27.4
Horsetooth	143.5	83.8	95.5	69.5
Jackson	35.4	32.2	30.5	30.6
Julesburg	28.2	20.5	20.1	20.6
Point of Rocks	70.0	54.1	65.6	51.8
Prewitt	32.8	8.3	22.6	18.0
Riverside	57.5	47.1	47.0	44.0

MEASURED FIRST OF MONTH

STREAMFLOW FORECAST (1,000 Acre-Feet)

Stream and Station	Forecast Period	This Year	Avg. 1948-1962
	April - Sept.	% of Avg.	1962
Big Thompson at Drake (2)	90	82	110
Boulder at Orodell	48	89	54
Cache La Poudre at Canon Mouth (1)	200	81	246
Clear Creek at Golden (3)	125	93	134
Saint Vrain at Lyons	62	78	80

SOIL MOISTURE

Station	Date of Survey	Capacity (Inches)	This Year	Last Year	Avg. All Data
Alpine Camp	10/10	6.9	3.7	5.5	3.6
Beaver Dam	11/30	7.1	2.9	5.5	3.9
Clear Creek	10/3	9.5	7.1	8.0	9.0
Feather	10/11	10.1	3.9	5.1	4.6
Guard Station	10/30	6.9	2.5	5.0	3.4
Hoop Creek	11/8	4.9	3.0	3.6	2.8
Hoosier Pass	11/15	7.8	4.1	4.8	5.0
Kenosah Pass	11/15	4.4	2.1	3.1	2.6
Laramie Road	10/11	12.4	8.6	11.9	7.9
Two Mile	11/30	9.1	4.1	6.5	5.6

- (1) Observed flow minus diversions from Michigan, Colorado and Laramie Rivers, plus diversions for irrigation and municipal use above station.
- (2) Observed flow plus by-pass to power plants.
- (3) Observed flow minus diversions through Jones Pass.

NOTE: * - 1948-62 (adjusted averages)

NS - NO SURVEY

(A) - AIR OBSERVED

(B) - ON ADJACENT DRAINAGE

This Report Prepared by Jack N. Washichek and Donald W. McAndrew, Soil Conservation Service, Colorado State University, Fort Collins, Colo.

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SOIL CONSERVATION SERVICE

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Fort Collins, Colorado

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LIST of COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Platte, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

STATE

Colorado State Engineer
New Mexico State Engineer
Nebraska State Engineer
Colorado Experiment Station
Rocky Mountain Forest and Range Experiment Station

FEDERAL

Department of Agriculture

Forest Service
Soil Conservation Service

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Department of Commerce

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Atomic Energy Commission

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City of Denver	City of Greeley
City of Boulder	City of Fort Collins

WATER USERS ORGANIZATIONS

Arkansas Valley Ditch Association
Colorado River Water Conservation District

IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company
San Luis Valley Irrigation District
Santa Maria Reservoir Company
Costilla Land Company
Uncompahgre Valley Water Users' Association
Twin Lakes Reservoir and Canal Company
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